AMENDMENT TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1.-28. (Cancelled).

29. (Currently Amended) ~~The method of claim 18~~ A method of coating a substrate, the method comprising:

reacting a reactant stream from a reactant inlet within a flow by directing a light beam at the reactant stream that drives a chemical reaction to produce within the flow a product stream comprising particles downstream from the light beam, wherein the reactant stream comprises a metal or metalloid precursor, wherein the particles are produced by the reaction, wherein the flow passes through the light beam, which does not intersect with the substrate, and wherein the reaction is driven by energy from the light beam;

directing the flow of the product stream to a substrate; and

moving the substrate relative to the flow of the product stream to coat the substrate with a coating comprising fused particles,

wherein an external field is applied to direct the product stream.

30. (Currently Amended) A method of forming a glass coating comprising:

reacting a reactant stream from a reactant inlet within a flow by directing a light beam at the reactant stream that drives a chemical reaction to produce within the flow a product stream comprising particles downstream from the light beam, wherein the reactant stream comprises a metal or metalloid precursor, wherein the particles are produced by the reaction, wherein the flow passes through the light beam, which does not intersect with the substrate, and wherein the reaction is driven by energy from the light beam;

directing the flow of the product stream to a substrate;

moving the substrate relative to the flow of the product stream to coat the substrate with a coating comprising fused particles; and

heating a particle coating at a temperature and for a period of time sufficient to fuse the particles into a glass ~~and where the particle coating is formed according to the method of claim 18~~.

31. (Original) A method of forming an optical component on a substrate surface, the method comprising removing a portion of a glass coating formed according to the method of claim 30 to form the optical component.

32. (Original) The method of claim 31 wherein the removing of a portion of the glass coating is performed by photolithography.

33. (Previously Presented) A method of coating a substrate comprising:

generating, within a flow, a reactant stream with a cross section perpendicular to the propagation direction of the reactant stream, the cross section being characterized by a major

axis and a minor axis, the major axis being at least a factor of two greater than the minor axis;

reacting the reactant stream to form a product stream of particles within the flow;

directing the flow of the product stream of particles to a substrate to deposit simultaneously a coating stripe on the substrate characterized by the major and minor axis of the flow; and,

moving the substrate relative to the flow of the product stream to coat the substrate with a coating comprising fused particles.

34. (Original) The method of claim 33 wherein at least about 25 grams per hour are deposited onto the substrate.

35. (Original) The method of claim 33 wherein the reaction is driven by a light beam.

36. (Original) The method of claim 33 wherein the major axis is at least a factor of ten greater than the minor axis.

37. (Original) The method of claim 33 wherein the flow of the stream of particles is maintained by momentum of the product stream.

38. (Original) The method of claim 33 wherein the flow of the stream of particles is maintained by pumping out a chamber and wherein the substrate is located within the chamber.

39-61. (Canceled)

62. (Currently Amended) The method of claim 30 [[27]] wherein the light beam is generated by a laser.

63. (Currently Amended) The method of claim 30 [[27]] wherein the reaction is performed in a reaction chamber and the method further comprising pumping on the reaction chamber to maintain flow through the reaction chamber.

64. (Currently Amended) The method of claim 30 [[27]] wherein the reactant stream is elongated in a direction along the propagation of the light beam.

65. (Currently Amended) The method of claim 30 [[27]] wherein the substrate is mounted on a stage with a thermal control feature so that the stage can be heated.

66. (Currently Amended) The method of claim 30 [[27]] wherein the substrate is mounted on a stage with a thermal control feature so that the stage can be cooled.

67-70. (Canceled)

71. (Previously Presented) A method of coating a substrate comprising:

generating a first product stream within a flow produced by a chemical reaction of a first reactant stream wherein the chemical reaction is driven by a light beam;

depositing the first product stream on a moving substrate to form a first coating;

generating a second product stream within a flow produced by a chemical reaction of a second reactant stream wherein the chemical reaction is driven by a light beam;

depositing the second product stream on the moving substrate to form a second coating; and

heating the substrate to form a first dense coating and a second dense coating.

72. (Previously Presented) The method of claim 71 wherein the heating of the substrate comprises a first heating of the substrate after depositing the first coating and before depositing the second coating to form the first dense coating and a second heating of the substrate after forming the second coating to form the second dense coating.

73. (Previously Presented) The method of claim 71 wherein the heating of the substrate is performed after deposition of the first coating and the second coating so that the first dense coating is not formed prior to the deposition of the second coating.